

IN THE CLAIMS:

1. (currently amended) A catalyst for an oxidation reaction of a hydrocarbon selected from the group consisting of alkanes, alkenes and mixtures thereof, said catalyst comprising Mo, Te, V and at least another A component selected from the group consisting of Nb, Ta, Sn, Se, W, Ti, Fe, Co, Ni, Cr and a rare earth, also comprising Cu, and having the empiric formula $\text{MoTe}_h\text{V}_i\text{Cu}_j\text{A}_k\text{O}_x$, in such a way that at least Mo, Te, V and Cu are present in the form of at least one oxide and which, in the calcined form, shows an X-ray diffractogram with five intense diffraction lines corresponding to diffraction angles of 2θ at 22.1 ± 0.4 , 27.1 ± 0.4 , 28.1 ± 0.4 , 36.0 ± 0.4 and 45.1 ± 0.4 , wherein h, i, j, k are between 0.001 and 4.0 and x depends on the oxidation status or valency of the Mo, Te, V, Cu and A elements.

2. (canceled)

3. (previously presented) A catalyst according to claim 1, wherein h and i are comprised between 0.01 and 3, the i/h ratio is comprised between 0.3 and 1, and j and k are comprised between 0.001 and 2.

4. (previously presented) A catalyst according to claim 1, wherein A is Nb or Ta, and h and i are comprised between 0.02 and 2, the i/h ratio is comprised between 0.3 and 1, and j is comprised between 0.001 and 0.5 and k is comprised between 0.001 and 2.

5. (previously presented) A catalyst according to claim 1, wherein said catalyst shows an X-ray diffractogram corresponding to

2 θ angle of diffraction (± 0.4)	Average spacing (Å)	Relative intensity
22.1	4.02	100
27.1	3.29	20-120
28.1	3.17	20-120
36.0	2.49	10-50
45.1	2.01	10-60

6. (previously presented) A catalyst according claim 1, wherein said catalyst is a mixed calcined oxide.

7. (previously presented) A catalyst according to claim 1, wherein said catalyst is a mixed oxide supported on a solid.

8. (previously presented) A catalyst according to claim 7, wherein the solid is selected from silica, aluminium oxide, titanium oxide and mixtures of these.

9. (previously presented) A catalyst according to claim 7, wherein the solid is silica contained in a ratio of 20 to 70% of the total weight of the catalyst.

10. (previously presented) A catalyst according to claim 1, wherein said catalyst is a mixed oxide supported on silicon carbide.

11. (canceled)

12. (withdrawn) A method for obtaining acrylic acid by a reaction of propylene and oxygen in a gaseous state in the presence of water vapour, comprising conducting such method in the presence of a catalyst according to claim 15.

13. (withdrawn) A method for obtaining acrylonitrile through a propylene and/or propylene and oxygen reaction, in the gaseous phase in the presence of ammonia and water vapour, comprising conducting such method in the presence of a catalyst according to claim 15.

14. (withdrawn) A method for obtaining methacrylic acid through an isobutene and/or isobutylene reaction with oxygen in the gaseous phase and in the presence of water, comprising conducting such method in the presence of a catalyst according to claim 15.

15. (withdrawn) A method of using a catalyst defined in any of the previous claims 1-10, said method comprising an oxidation reaction by putting into contact said catalyst with a hydrocarbon selected from among alkanes, alkenes and mixtures thereof in a gaseous state.